

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended). A static lamination micro-mixer for mixing, dispersing, emulsifying or suspending at least a first fluid phase and a second fluid phase, comprising at least one first feed channel adapted to receive the first fluid phase and at least one second feed channel adapted to receive the second fluid phase, at least one slotted plate having at least one first slot opening and at least one second slot opening completely penetrating the at least one slotted plate and an aperture plate having at least one aperture slot arranged above the at least one first slot opening and the at least one second slot opening of the at least one slotted plate, wherein the at least one aperture slot of the aperture plate forms a continuous opening between the at least one first and the at least one second slot openings of the at least one slotted plate, wherein the at least one first slot opening of the at least one slotted plate overlaps the first feed channel and the at least one second slot opening of the at least one slotted plate overlaps the second feed channel, wherein the at least one slotted plate is arranged above the first and second feed channels and located between the aperture plate and the first and second feed channels.

Claim 2 (previously presented). Micro-mixer according to Claim 1, wherein the at least one slotted plate comprises additional slot openings and/or the aperture plate comprises additional aperture slots.

Claim 3 (canceled).

Claim 4 (previously presented). Micro-mixer according to claim 1, wherein the at least one first and the at least one second slot openings in the at least one slotted plate are configured so that the first and second fluid phases enter the at least

one aperture slot of the aperture plate or an additional slotted plate located above.

Claim 5 (previously presented). Micro-mixer according to claim 1, wherein the continuous opening of the at least one aperture slot of the aperture plate overlaps the at least one first and the at least one second slot openings in the at least one slotted plate, wherein the first and second fluid phases come into contact with one another in the continuous opening of the at least one aperture slot of the aperture plate.

Claim 6 (canceled).

Claim 7 (previously presented). Micro-mixer according to claim 1, wherein the at least one first and the at least one second slot openings in the at least one slotted plate are arranged obliquely in relation to one another.

Claim 8 (previously presented). Micro-mixer according to claim 1, wherein a top view of the at least one first and the at least one second slot openings in the at least one slotted plate is configured in the shape of a funnel or lobe.

Claim 9 (previously presented). Micro-mixer according to claim 1, further comprising a plurality of additional slotted plates located adjacent to the at least one slotted plate and/or a plurality of additional aperture plates located adjacent to the aperture plate, wherein the pluralities of additional slotted plates and/or additional aperture plates are arranged directly above one another or offset with respect to one another.

Claim 10 (previously presented). Micro-mixer according to claim 21, further comprising a plurality of support structures fitted to the housing.

Claim 11 (canceled).

Claim 12 (previously presented). Micro-mixer according to claim 1, further comprising a mixing chamber fitted above the aperture plate.

Claim 13 (previously presented). Micro-mixer according to claim 1, further comprising additional aperture slots in the aperture plate, wherein the additional aperture slots are offset parallel to one another and/or are arranged in a periodic pattern with respect to one another.

Claim 14 (previously presented). Micro-mixer according to claim 1, wherein the at least one first and the at least one second slot openings in the at least one slotted plate and the at least one aperture slot in the aperture plate are arranged at an angle with respect to one another.

Claim 15 (previously presented). Micro-mixer according to claim 1, wherein the at least one first and the at least second slot openings in the at least one slotted plate and the at least one aperture slot in the aperture plate have a width of less than 500 μm .

Claim 16 (previously presented). Micro-mixer according to claim 1, wherein the at least one slotted and aperture plates are formed, partly or completely, of metal, glass, ceramic or plastic or of a combination of these materials.

Claim 17 (canceled).

Claim 18 (previously presented). Micro-mixer according to claim 1, wherein the at least one slotted and aperture plates comprise a stack of micro-structured thin plates.

Claim 19 (previously presented). Micro-mixer according to Claim 18, wherein the thin micro-structured plates are connected materially by means of soldering, welding,

diffusion welding or adhesive bonding or with a force fit by means of screwing, pressing or riveting.

Claim 20 (previously presented). Micro-mixer according to claim 1, wherein the at least one aperture slot in the aperture plate and the at least one first and the at least one second slot openings in the at least one slotted plate are of branched configuration.

Claim 21 (previously presented). Micro-mixer according to claim 1, wherein the micro-mixer is accommodated in a housing.

Claim 22 (previously presented). Micro-mixer according to claim 21, wherein the housing contains the at least one first and second feed channels which promote spatial distribution of the first and second fluid phases.

Claim 23 (previously presented). Micro-mixer according to claim 22, wherein the at least one first and second feed channels are arranged offset parallel from one another, radially, concentrically or behind one another in order to distribute the first and second fluid phases in the housing.

Claim 24 (previously presented). Micro-mixer according to claim 22, wherein the at least one first and second feed channels are designed with constant or variable cross sections in order to distribute the first and second fluid phases in the housing.

Claim 25 (currently amended). Method for mixing, dispersing, emulsifying or suspending at least first and second fluid phases, which comprises:
leading the first fluid phase from a first feed channel through at least one first slot opening of at least one slotted plate and into at least one aperture slot in an aperture plate; and

leading the second fluid phase from a second feed channel through at least one second slot opening of the at least one slotted plate and into the at least one aperture slot in the aperture plate, wherein the at least one first and the at least one second slot openings completely penetrate the at least one slotted plate, wherein the at least one aperture slot in the aperture plate forms a continuous opening between the at least one first and the at least one second slot openings of the at least one slotted plate, and further wherein the at least one slotted plate is located between the aperture plate and the first and second feed channels and arranged above the first and second feed channels.

Claim 26 (previously presented). Micro-mixer of claim 15, wherein the width is less than 10 μm .

Claim 27 (previously presented). The method of claim 25, further comprising:
producing the at least one slotted plate and/or the aperture plate by punching, embossing, milling, erosion, etching, plasma etching, laser cutting or a LIGA technique.

Claim 28 (previously presented). Micro-mixer of claim 1, wherein the at least one aperture slot of the aperture plate is located between the at least one first and the at least one second slot openings of the at least one slotted plate.

Claim 29 (previously presented). Micro-mixer of claim 14, wherein the angle is up to 90°.

Claim 30 (new). A static lamination micro-mixer for mixing, dispersing, emulsifying or suspending at least a first fluid phase and a second fluid phase, comprising at least one first feed channel adapted to receive the first fluid phase and at least one second feed channel adapted to receive the second fluid phase, at least one slotted plate having at least one first slot opening and at least one second slot opening completely penetrating the at least one slotted plate and an aperture

plate having at least one aperture slot arranged above the at least one first slot opening and the at least one second slot opening of the at least one slotted plate, wherein the at least one aperture slot of the aperture plate forms a continuous opening between the at least one first and the at least one second slot openings of the at least one slotted plate, wherein the at least one first slot opening of the at least one slotted plate overlaps the first feed channel and the at least one second slot opening of the at least one slotted plate overlaps the second feed channel, wherein the at least one slotted plate is arranged directly above the first and second feed channels.